

appendix A

COMMON TRANSPORTATION-LAND USE ISSUES

Some issues seem to be common to many types of communities. This appendix presents a list of some of the more typical ones. They are organized as follows:

A. Issues relating to traffic safety and congestion

A. Issues relating to traffic safety and congestion

A-1. Safety and traffic capacity along an almost fully developed commercial strip are deteriorating.

A-2. The land along a state highway is ripening for development, and this could present both opportunity and problems

- Community commercial development
- “Big box” development
- Residential development

A-3. Traffic speed is a persistent problem along state highways

A-4. The community is a job center, and the level of service along the major state highway into the community during peak commuting hours is worsening

B. Issues relating to safety and quality of life in neighborhoods

B-1. Traffic speed is a persistent problem in neighborhoods

B-2. “Smart growth” ideas like walkable neighborhoods near schools and local services seem to be out of our reach

C. Issues relating to expanding choice in transportation

C-1. Local citizens have little choice in transportation

- Elderly and demand-response transit
- Fixed route bus service
- Safe walking and bicycling

C-2. The existing transportation network falls short of meeting tourist needs and is experiencing congestion

D. Issues relating to town centers

D-1. Conflicts between downtown and the state highway that passes through it are causing problems for both

D-2. The Town lacks a recognizable center, but a key intersection, if developed properly, could fill that role

D-3. Parking in the town center is insufficient to meet the combined needs of customers and workers

D-4. Trucks are rumbling through downtowns (or neighborhoods)

E. Issues relating to taking advantage of regional transportation facilities for economic development

E-1. A regional transportation interchange or facility is a vital part of the community but it is unclear how to take advantage of it

- Highway interchange
- Rail facilities
- Airport

E-2. Marine transportation facilities are threatened by rising coastal land values and non-marine land uses

F. Issues relating to preserving quality of place

F-1. A rural arterial does not meet modern standards for lane widths and shoulders, but there are features along the road we want to preserve if and when MaineDOT upgrades it

- Rural features
- Village features

F-2. The main road into Town is a scenic gateway to the community, but it is deteriorating in the face of random development

F-3. Complaints about traffic noise from the nearby highway are increasing

G. Issues relating to environmental conditions

G-1. New local road construction or upgrading of an existing local road will impact a stream and the municipal storm drainage system

These are by no means exhaustive. They are examples only. Your community probably has issues not listed here. Consider the inventory of information (including citizen impressions) gathered for your own community and state the issues in your own terms, as they seem to apply in your area. And, in any case, any one community likely will be experiencing only some of the issues listed here.

In the tables below, you'll find a list of the common issues and possible strategies to address them. These are presented as a menu: select the ones that seem appropriate to your situation. Then move to the page indicated in Appendix B to get a summary description of the strategy.

Note that any given problem or opportunity may employ two or more of the strategies, and also that any one strategy may be helpful in addressing more than one of the issues. And do not feel limited by this menu. Use the knowledge available to you to customize your own solutions.

In settling upon a statement of a problem, make sure you look back at the inventories and are able to document it. For example, if your community thinks it is experiencing a safety and capacity problem along a major road, document it through your inventories of traffic volumes, road conditions, traffic speed, the number and locations of driveways, crash data, and provisions for pedestrians and cyclists.

Finally, the menu of strategies listed here does not include financial strategies, such as grants, borrowing, impact fees, and pricing mechanisms. For those, please see Chapter 8, where financial strategies to implement plans are discussed.

The Sample of Common Issues

A. Relating to traffic safety and congestion

A-1. Safety and traffic capacity along an almost fully developed commercial strip are deteriorating

Situation: You are faced with a street that is lined with commercial development. It is congested at times, and motorists consider it confusing and unsafe because of traffic turning into and off of the street. The sidewalk system is fragmented, and pedestrians trying to cross driveways or the street think the environment is uninviting and unsafe.

Menu of strategies:

1.1 Contain development within limited growth area boundaries	p. B-1
1.3 Retrofit the number, location, and design of driveways	p. B-6
1.4 Provide for alternate routing of traffic	p. B-8
1.6 Institute turning controls within the roadway	p. B-11
3.1 Extend and connect the pedestrian network of sidewalks and cross-walks	p. B-23

A-2. The land along a state highway is ripening for development, and this could present both opportunity and problems

Situation A – Community commercial growth: The community sees the two-lane state highway as the best location for commercial growth and expanding the tax base. Scattered development, mostly small scale, already is located here, along with a number of homes. The Town wants to allow more extensive development, but without seriously compromising traffic flow and safety along the road.

Menu of strategies:

1.1 Contain development within limited growth area boundaries	p. B-1
1.2 Limit the number of new driveways onto major collectors and arterials	p. B-5
2.1 Diversify allowed land uses	p. B-14

2.3 Increase density of development to expand economic and transportation opportunities	p. B-16
2.4 Create a decentralized community sanitary district for subsurface wastewater disposal	p. B-17
3.1 Extend and connect the pedestrian network of sidewalks and cross-walks	p. B-23
3.5 Introduce or expand fixed route bus service	p. B-28
5.5 Adopt performance standards for signs, parking, and landscaping for highway-oriented development	p. B-43

Situation B – “Big box” growth: The community is in the pathway of regional development, and one or more of its state roads could be targeted specifically for “big box” development. The Town is interested but also wants to minimize impacts to the character and functioning of this part of the community.

Menu of strategies:

1.1 Contain development within limited growth area boundaries	p. B-1
1.2 Limit the number of new driveways onto major collectors and arterials	p. B-5
1.6 Institute turning controls	p. B-11
2.3 Increase density of development to expand economic and transportation opportunities	p. B-16
4.1 Anticipate regional transportation needs for an undeveloped or new growth area	p. B-31
5.5 Adopt performance standards for signs, parking, and landscaping for highway-oriented development	p. B-43

Situation C – Residential growth: The community is experiencing lot-by-lot development along a moderately traveled state road outside of the village area. The number of driveways out to the road is increasing and may become a traffic safety problem. The Town wants this stretch of road to be part of its designated growth area but wants to avoid potential traffic and safety problems.

Menu of strategies:

1.1 Contain development within limited growth area boundaries	p. B-38
1.4 Provide for alternative routing of traffic	p. B-8
1.5 Interconnect the local street system	p. B-9
2.5 Prepare and adopt an “official map” for streets and other public improvements	p. B-18
3.1 Extend and connect pedestrian network of sidewalks and cross-walks	p. B-23

A-3. Traffic speed is a persistent and growing problem along state highways

Traffic speed along a state highway that passes through the settled portion of the community poses perceived dangers for cars trying to cross from one side of town to the other. The needs for safety, community connections, and mobility have to be resolved.

Menu of strategies:

5.2 Retrofit streets and highways using flexible, “context sensitive” design	p. B-38
5.3 Institute traffic calming measures	p. B-40

A-4. The community is a job and service center, and the level of service along the major state highway into the community during peak commuting hours is worsening.

Situation: The principal route into and out of the community is a state arterial, and the congestion during commuting hours is both worsening and lengthening in time. Level of service has been established by MaineDOT as “C”, but projections are that it will drop to unacceptable levels (“E” or “F”) in the next decade.

Menu of strategies:

I.2 Limit the number of new driveways onto major collectors and arterials	p. B-5
I.3 Retrofit the number, location, and design of driveway	p. B-6
I.4 Provide for alternative routing of traffic	p. B-8
I.6 Institute turning controls	p. B-11
I.8 Work toward jobs-housing balance	p. B-13
3.3 Introduce or expand ride sharing	p. B-26
3.5 Introduce or expand fixed route bus service	p. B-28
3.6 Introduce or expand passenger rail service	p. B-30

B Issues Relating to Safety and Quality of Life in Neighborhoods

B-1. Traffic speed in neighborhoods is a persistent problem

Cars traveling on certain local streets along and through neighborhoods regularly exceed safe speeds, creating perceived dangers for children and pets and causing noise at levels that reduce quality of life in the neighborhood.

Menu of strategies:

3.1 Extend and connect pedestrian network of sidewalks and cross-walks	p. B-23
5.1 Design or retrofit local streets for human scale	p. B-36
5.3 Institute traffic calming measures	p. B-40

B-2. “Smart growth” ideas like walkable neighborhoods near schools and local services seem to be out of our reach

Situation: The Town wants to prevent sprawl in rural parts of the community and instead wants to steer at least some of that development into locations in designated growth areas, where homes can be closer to a school or local services. It likes the idea of traditional, small-town New England neighborhoods, but the development is typically small-scale, involves multiple property owners, and only evolves slowly over time. Further, the Town does not have public sewers, so development must rely on sub-surface wastewater disposal. It is unclear how to set the direction for traditional neighborhood development under these conditions.

Menu of strategies:

1.5 Interconnect the local street system	p. B-9
2.1 Diversify allowed land uses	p. B-14
2.2 Locate residences and uses needed by neighborhood residents, such as elementary schools and stores with convenience goods and services, close to each other	p. B-15
2.3 Increase density of development to expand economic and transportation opportunities	p. B-16
2.4 Create a decentralized community sanitary district for subsurface wastewater disposal	p. B-17
2.5 Prepare and adopt an “official map” for streets and other public improvements	p. B-18
2.8 Locate public buildings to meet LEED siting criteria	p. B-22
3.1 Extend and connect pedestrian network of sidewalks and cross-walks	p. B-23
5.1 Design or retrofit streets for human scale	p. B-36

C. Issues relating to expanding choice in transportation

C-1. Local citizens have little choice in transportation

Situation A – Elderly: The community currently has few choices to get to shopping, jobs, and services elsewhere in the region. The community can foresee that a growing elderly population may no longer be able to rely solely on their cars and wants to increase choices available to this population.

Menu of strategies:

1.5 Interconnect the local street system	p. B-9
2.1 Diversify allowed land uses	p. B-14
2.2 Locate residences and uses needed by neighborhood residents, such as elementary schools and stores with convenience goods and services, close to each other	p. B-15
2.8 Locate public buildings to meet LEED siting criteria	p. B-22
3.1 Extend and connect pedestrian network of sidewalks and cross-walks	p. B-23
3.4 Introduce or expand demand-response transit service	p. B-27
3.5 Introduce or expand fixed route bus service	p. B-28
5.1 Design or retrofit streets for human scale	p. B-36

Situation B – “Township of transit opportunity”: The community has enough population, employment, tourist activity, and/or institutional uses such as medical, governmental, or educational facilities that it could be a candidate for bus service. It is listed by MaineDOT as a “township of transit opportunity.” Certain segments of the population – elderly, households that cannot afford cars, tourists and other visitors, workers at major facilities – would find bus service either essential or desirable.

Menu of strategies:

1.5 Interconnect the local street system	p. B-9
2.1 Diversify allowed land uses	p. B-14
2.2 Locate residences and uses needed by neighborhood residents, such as elementary schools and stores with convenience goods and services, close to each other	p. B-15
2.3 Increase density of development to expand economic and transportation opportunities	p. B-16
3.1 Extend and connect pedestrian network of sidewalks and cross-walks	p. B-23
3.5 Introduce or expand fixed route bus service	p. B-28
5.1 Design or retrofit streets for human scale	p. B-36

Situation C – Safe walking and bicycling: Walking in the community – from home to local destinations such as schools and convenience stores, and along and across busy streets – is considered dangerous or at least uninviting, and accommodations for bicycling are non-existent. The Town would like to improve these situations both as a matter of quality of life and to provide practical alternatives for short trips within the community.

Menu of strategies:

1.5 Interconnect the local street system	p. B-9
2.2 Locate residences and uses needed by neighborhood residents, such as elementary schools and stores with convenience goods and services, close to each other	p. B-15
2.8 Locate public buildings to meet LEED siting criteria	p. B-22
3.1 Extend and connect pedestrian network of sidewalks and cross-walks	p. B-23
3.2 Plan and provide for bicycle lanes	p. B-24
3.5 Introduce or expand fixed route bus service	p. B-28
5.1 Design or retrofit streets for human scale	p. B-36

C-2. The existing transportation network falls short of meeting tourist needs and is experiencing congestion.

Situation: The community is an established tourist town and wants to gain competitive advantage, as well as relieve seasonal traffic congestion, by making sure that visitors can easily reach a variety of destinations by different means of travel.

Menu of strategies:

1.5 Interconnect the local street system	p. B-8
1.6 Provide for alternative routing of traffic	p. B-11
1.7 Improve wayfinding	p. B-12
3.1 Extend and connect pedestrian network of sidewalks and cross-walks	p. B-23
3.2 Plan and provide for bicycle lanes	p. B-24
3.5 Introduce or expand fixed route bus service	p. B-28
3.6 Introduce or expand passenger rail service	p. B-30

D. Issues relating to town centers

D-1. Conflicts between downtown and the state highway that passes through it are causing problems for both

Situation: Downtown is an important part of the local economy and a source of pride. But it straddles a state highway, and increasing traffic is causing congestion, noise, vibrations, and an uncomfortable environment for pedestrians. There is talk of the need to better accommodate the traffic, and worry about losing parking spaces and the pedestrian-friendly atmosphere that is essential to the downtown.

Menu of strategies:

1.4 Provide for alternative routing of traffic	p. B-8
1.5 Interconnect the local street system	p. B-9
1.6 Provide for alternative routing of traffic	p. B-11
2.7 Evaluate standards for on and off-street parking	p. B-21
3.4 Introduce or expand demand-response transit	p. B-27

3.5 Introduce or expand fixed route bus service	p. B-28
5.1 Design or retrofit streets for human scale	p. B-36
5.2 Retrofit streets and highways using flexible, “context sensitive” design	p. B-38

D-2. The Town lacks a recognizable center, but a key intersection, if developed properly, could fill that role.

Situation: We’re a small, rural town that wants to take advantage of a key intersection as an area for growth and development. We don’t have a strong town center at present (or would like to promote an additional one) and think this offers an opportunity.

Menu of strategies:

1.2 Limit the number of new driveways onto major collectors and arterials	p. B-5
1.5 Interconnect the local street system	p. B-9
2.1 Diversify allowed land uses	p. B-14
2.2 Locate residences and uses needed by neighborhood residents, such as elementary schools and stores with convenience goods and services, close to each other	p. B-15
2.3 Increase density of development to expand economic and transportation opportunities	p. B-16
2.4 Create a decentralized community sanitary district for subsurface wastewater disposal	p. B-17
2.5 Prepare an “official map” for streets and other public improvements	p. B-18
2.8 Locate public buildings to meet LEED siting criteria	p. B-22
3.1 Extend and connect pedestrian network of sidewalks and cross-walks	p. B-23

D-3. Parking in the town center is insufficient to meet the combined needs of customers and workers

Situation: Most businesses and institutions rely on on-street parking in the town center, a modestly sized public parking lot, and a variety of small off-street lots. The available spaces are near capacity during peak hours on many business days.

Menu of strategies:

2.3 Increase density of development to expand transportation and economic opportunities	p. B-16
2.6 Modify use, supply, and location of public parking	p. B-19
3.4 Introduce or expand demand-response transit service	p. B-27
3.1 Extend and connect pedestrian network of sidewalks and crosswalks	p. B-23
3.5 Introduce or expand fixed route bus service	p. B-128

D-4. Trucks are rumbling through downtowns (or neighborhoods)

Situation: The road through downtown (or a residential area) is a truck route for delivery of freight that originates from beyond town boundaries and must pass through town to reach its points of delivery. The resulting noise, dust, and vibration are eroding quality of life.

Menu of strategies:

1.4 Provide for alternate routing of traffic	p. B-8
1.6 Institute turning controls	p. B-11
4.3 Upgrade connectivity between industrial areas and the regional transportation system	p. B-35

E. Issues relating to taking advantage of regional transportation facilities

E-1. A regional transportation interchange or facility is a vital part of the community but it is unclear how to take advantage of it

Situation A – Highway interchange: An undeveloped or underdeveloped area around a highway interchange or along a connection to the interchange offers an opportunity for business development. The road and interchange may be under-designed for intense development, and traffic on it is already fairly heavy. The community sees this area as possible growth area but is unsure how to move forward.

Menu of strategies:

1.1 Contain development within limited growth area boundaries	p. B-1
1.2 Limit the number of new driveways onto major collectors and arterials	p. B-5
1.4 Provide for alternative routing of traffic	p. B-8
1.6 Institute turning controls	p. B-11
2.3 Increase density of development to expand transportation and economic opportunities	p. B-16
3.5 Introduce or expand fixed route bus service	p. B-28
4.1 Anticipate regional transportation needs for an undeveloped or new growth area	p. B-31
4.2 Allow for operation and expansion of regional transportation facilities	p. B-33
5.2 Retrofit streets and highways using flexible, “context sensitive” design	p. B-38
5.5 Adopt performance standards for signs, parking, and landscaping for highway-oriented development	p. B-43

Situation B – Rail facilities: A rail line passes through Town, close to a port or industrial area, and in the past there were active industries with rail sidings to them. Some of these have fallen into disuse, and meanwhile other businesses that might be able to take advantage of rail have located some distance away. The Town would like to encourage expanded use of rail both to grow business and potentially to reduce the flow of truck traffic through the community and region.

Menu of strategies:

4.2 Allow for operation and expansion of regional transportation facilities	p. B-33
4.3 Upgrade connectivity between industrial areas and the regional transportation system	p. B-35

Situation C – Airport: A regional airport is located in the community with potential for growth. There are signs of increasing residential development in the area around the airport, and while this has not caused much of a problem so far, the Town can foresee a time when the growth of both the airport and residential development will be incompatible, possibly inhibiting airport expansion.

Menu of strategies:

4.2 Allow for operation and expansion of regional transportation facilities	p. B-33
4.3 Upgrade connectivity between industrial areas and the regional transportation system	p. B-35

E-2. Marine transportation facilities are threatened by rising coastal land prices and non-marine land uses.

Situation: Growth pressures around a marine transportation terminal are leading to replacement of traditional neighboring waterfront uses with residential development.

Menu of strategies:

4.2 Allow for operation and expansion of regional transportation facilities	p. B-33
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F. Issues relating to preserving quality of place

F-1. A rural arterial does not meet modern standards for lane widths and shoulders, but there are features along the road we want to preserve if and when MaineDOT upgrades it

Situation A: Stands of trees, stone walls, and a scenic vista in a rural part of town are part of the Town's identity, highly valued by residents. At the same time, the road is going to have to be upgraded sooner or later. The Town has included these in its inventory of special features and wants to make sure that they can be preserved.

Menu of strategies:

5.1 Design or retrofit streets for human scale	p. B-36
5.2 Retrofit streets and highways using flexible, "context sensitive" design	p. B-38
5.6 Conduct a visual assessment and adopt view corridor standards	p. B-45

Situation B: The appeal of the village center includes its street trees, on-street parking, the relationship of the street to the buildings, some of which may be historic, and the ease of walking along the street and crossing it. However, if traffic volumes increase to the point that the arterial must be upgraded, lanes and shoulders may need to be widened, compromising each of these important features. Thus, it wants to manage traffic growth and impacts before reaching this point.

Menu of strategies:

1.5 Interconnect the local street system	p. B-9
2.3 Increase density of development to expand economic and transportation opportunities	p. B-16
2.6 Modify use, supply, and location of public parking	p. B-19
3.5 Introduce or expand fixed-route bus service	p. B-28
5.1 Design or retrofit streets for human scale	p. B-36
5.2 Retrofit streets and highways using flexible, “context sensitive” design	p. B-37

F-2. The main road into Town used to be a scenic gateway to the community, but it is deteriorating in the face of random development

Situation: Until recently, the entry into Town – the first few miles before reaching the more settled part of the Town – was mostly in open space with a variety of fields, treelines, occasional homes, and views. But a somewhat hodge-podge assortment of development in random locations along this stretch of road is beginning to change the face of the community.

Menu of strategies:

1.1 Contain development within limited growth area boundaries	p. B-1
5.5 Adopt performance standards, including for signs, parking, and landscaping, for highway-oriented development	p. B-43
5.6 Conduct a visual assessment and adopt view corridor standards	p. B-45

G. Issues relating to environmental conditions

Note: Transportation systems affect and are affected by environmental conditions in many ways and thus are regulated by the Clean Water and Clean Air Acts, the National Environmental Policy Act (NEPA), and other statutes and rules. MaineDOT and the Maine Turnpike Authority, rather than communities, are the primary agencies working with these laws, and the environmental requirements are beyond the scope of this handbook. However, following is one type of common issue, presented for illustration, that communities may face.

G-1. New local road construction or upgrading of an existing local road will impact a stream and the municipal storm drainage system

5.7 Incorporate best management practices for erosion control and storm water management into subdivision and site plan review ordinances	p. B-47
5.8 Assure proper design of culverts for streams with fish populations	p. B-48